

## ABSTRACT

A method and a system are presented, which assist classifiers in gathering information in a cost-effective manner by determining which piece of information, if any, to gather next.

The system includes an explicit system, an implicit system, a classifier, and a profit

5 module. A feature set is inputted into the explicit system, which uses the feature set to determine tests to perform to gather information useful for classifying the system state.

The relative profit of each test performed is determined by the profit module and the profit determined is used to determine which test or tests to select for a particular feature

set. The results of the explicit system, which is generally an exhaustive or semi-

10 exhaustive search algorithm, are used to train the implicit system. The implicit system is then able to process decisions much faster than the explicit system when circumstances require time-critical operation.